

AD-A052 190

ARMY ELECTRONICS COMMAND WHITE SANDS MISSILE RANGE N--ETC F/G 16/1
12828D LANCE MISSILE NO. 3304, ROUND NO. 308 ESL (19 JANUARY 19--ETC(U)
JAN 78

UNCLASSIFIED

DR-960

NL

OF
AD
A052 190



END
DATE
FILMED
5-78
DDC

AD A 052190

APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED

DR-960
January 1978

AD

12

METEOROLOGICAL DATA REPORT

12828D LANCE
MISSILE NO. 3304, ROUND NO. 308 ESL
(19 JANUARY 1978)

BY

WSMR METEOROLOGICAL TEAM

AD No.

DDC FILE COPY

DDC
RECEIVED
APR 5 1978
B

ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

ECOM

UNITED STATES ARMY ELECTRONICS COMMAND

DISPOSITION INSTRUCTIONS

Destroy this report when it is no longer needed. Do not return to the originator.

DISCLAIMER

The findings in this report are not to be construed as an official Department of the Army position, unless so designated by other authorized documents.

The citation of trade names and names of manufacturers in this report is not to be construed as official Government indorsement or approval of commercial products or services referenced herein.

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

Meteorological data rept.

14 REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER DR-969	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) 12828D Lance Missile No. 3304, Round No. 308 <u>ESL</u> (19 January 1978).		5. TYPE OF REPORT & PERIOD COVERED 17 12
7. AUTHOR(s) WSMR Meteorological Team		6. PERFORMING ORG. REPORT NUMBER
9. PERFORMING ORGANIZATION NAME AND ADDRESS		8. CONTRACT OR GRANT NUMBER(s) DA Task 1T665702D127-02
11. CONTROLLING OFFICE NAME AND ADDRESS US Army Electronics Command Atmospheric Sciences Laboratory White Sands Missile Range, New Mexico		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS 12 37p.
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) US Army Electronics Command Ft. Monmouth, New Jersey		13. REPORT DATE 11 Jan 1978 15. SECURITY CLASS. (of this report) UNCLASSIFIED 15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report) Approved for public release; distribution unlimited.		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report) DDC RECEIVED APR 5 1978 B		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) 1. Ballistics 2. Meteorology 3. Wind		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of 12828D Lance, Missile Number 3304, Round Number 308 ESL, are presented in tabular form.		

DD FORM 1 JAN 73 1473

EDITION OF 1 NOV 65 IS OBSOLETE

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

CONTENTS

	PAGE
INTRODUCTION -----	1
DISCUSSION -----	1
TABLES	
I. Surface Observations taken at LC-33 -----	1
II. Pilot-Balloon-Measured Wind Data, Release No. 1 at 0820 MST -----	2
III. Pilot-Balloon-Measured Wind Data, Release No. 2 at 0832 MST -----	4
IV. WSD Significant Level Data (Release Time: 0820 MST) -----	6
V. WSD Upper Air Data (Release Time: 0820 MST) -----	8
VI. WSD Mandatory Levels (Release Time: 0820 MST) -----	25
VII. SMR Significant Level Data (Release Time: 0820 MST) -----	26
VIII. SMR Upper Air Data (Release Time: 0820 MST) -----	28
IX. SMR Mandatory Levels (Release Time: 0820 MST) -----	33

ACCESSION for	
NTIS	White Section <input checked="" type="checkbox"/>
DDC	Buff Section <input type="checkbox"/>
UNANNOUNCED	<input type="checkbox"/>
JUSTIFICATION	
BY	
DISTRIBUTION/AVAILABILITY CODES	
Dist.	AVAIL. and/or SPECIAL
A	23 24

DISCLAIMER NOTICE

**THIS DOCUMENT IS BEST QUALITY
PRACTICABLE. THE COPY FURNISHED
TO DDC CONTAINED A SIGNIFICANT
NUMBER OF PAGES WHICH DO NOT
REPRODUCE LEGIBLY.**

INTRODUCTION

12828D Lance, Missile Number 3304, Round Number 308 ESL, was launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 0832 HRS MST/19 January 1978. The scheduled launch time was 0830 HRS MST.

DISCUSSION

Meteorological data were recorded and reduced by the WSMR Meteorological Team, Atmospheric Sciences Laboratory (ASL), WSMR, New Mexico. The data are presented in the following tabulations.

ELEVATION	3,987	FEET/MSL
PRESSURE	882.8	MBS
TEMPERATURE	0.9	°C
RELATIVE HUMIDITY	80	%
DEW POINT	-2.1	°C
DENSITY	1,118	GM/M ³
WIND SPEED	10	MPH
WIND DIRECTION	185	DEGREES
CLOUD COVER	10	Cs

TABLE I. SURFACE OBSERVATIONS TAKEN AT LC-33,
AT 0832 HRS MST/19 JANUARY 1978.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)	HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
SUR	185	10.0	2100	137	14.5
100	186	10.0	2200	140	13.5
200	187	9.5	2300	139	12.0
300	188	9.0	2400	139	11.0
400	189	8.5	2500	137	9.0
500	189	10.0	2600	136	7.0
600	189	12.0	2700	137	9.0
700	188	12.0	2800	159	7.5
800	187	11.5	2900	171	8.0
900	194	11.5	3000	177	8.5
1000	201	12.0	3100	189	8.5
1100	200	12.0	3200	196	9.0
1200	199	12.0	3300	206	8.0
1300	190	11.5	3400	216	9.0
1400	180	11.5	3500	223	7.5
1500	172	12.0	3600	231	6.5
1600	164	13.0	3700	190	3.5
1700	160	14.0	3800	126	5.5
1800	155	14.5	3900	206	5.5
1900	145	14.5	4000	183	6.5
2000	135	15.5	4100	179	5.5

TABLE II. PILOT-BALLOON-MEASURED WIND DATA, RELEASE NO. 1
RELEASED FROM LC-33, AT 0820 MST/19 JANUARY 1978
12828D LANCE, MISSILE NO. 3304, ROUND NO. 308 ESL

PIBAL RELEASE POINT WSTM COORDINATES:

X = 486,296.83 Y = 185,251.85 Z = 3,986.67

APPROXIMATELY: 815 FEET SSE OF LAUNCHER.

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
4200	178	5.0
4300	188	5.5
4400	193	5.5
4500	190	5.0
4600	185	4.5

TABLE II. (CONT)

NOTE: WIND DIRECTION ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
SUR	185	10.0
100	187	10.0
200	188	10.0
300	188	11.0
400	189	11.5
500	190	12.0
600	191	14.0
700	190	12.0
800	188	11.5
900	189	11.0
1000	190	11.0
1100	187	11.5
1200	185	12.0
1300	179	12.5
1400	174	13.5
1500	169	13.0
1600	163	12.5
1700	155	12.5
1800	143	12.5
1900	138	12.0
2000	131	13.0

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
2100	134	13.5
2200	137	14.5
2300	140	12.5
2400	144	11.0
2500	151	10.5
2600	161	9.5
2700	159	9.0
2800	158	8.5
2900	170	10.0
3000	179	9.5
3100	184	8.5
3200	196	8.5
3300	198	9.5
3400	200	10.0
3500	193	7.5
3600	179	5.5
3700	166	5.5
3800	152	6.0
3900	161	7.0
4000	168	8.0
4100	168	6.5

TABLE III. PILOT-BALLOON-MEASURED WIND DATA, RELEASE NO. 2
RELEASED FROM LC-33, AT 0832 MST/19 JANUARY 1978
12828D LANCE, MISSILE NO. 3304, ROUND NO. 308 ESL

PIBAL RELEASE POINT WSTM COORDINATES:

X = 486,296.83 Y = 185,251.85 Z = 3,986.67

APPROXIMATELY: 815 FEET SSE OF LAUNCHER.

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
4200	168	6.0
4300	170	6.0
4400	172	6.5

TABLE III. (CONT)

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

STATION ALTITUDE 3989.00 FEET MSL
19 JAN. 78
ASCENSION NO. 49

SIGNIFICANT LEVEL DATA

0190020049
WHITE SANDS
TABLE IV.

GEODETTIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

PRESSURE GEOMETRIC		TEMPERATURE		REF. HUM. PERCENT
MILLIBARS	ALTITUDE MSL FEET	AIR DEGREES	DEW POINT CENTIGRADE	
884.3	3989.0	-2.3	-1.2	69.0
875.8	4244.7	-2.3	-10.3	54.0
850.0	5021.0	-4.4	-9.4	68.0
827.0	5727.9	-6.3	-9.5	78.0
815.0	6104.4	-4.7	-7.4	81.0
779.8	7241.9	-6.2	-7.7	89.0
766.8	7676.2	-3.4	-3.7	98.0
736.8	8713.0	-3.1	-10.0	59.0
717.8	9390.3	-4.2	-9.6	66.0
700.0	10039.0	-5.0	-13.5	51.0
672.6	11064.4	-7.1	-16.2	48.0
649.3	11965.2	-7.6	-20.0	36.0
594.3	14210.9	-10.6	-23.4	34.0
577.8	14923.7	-8.7	-22.4	32.0
560.8	15683.2	-8.2	-17.2	48.0
534.8	16885.7	-10.9	-19.2	50.0
500.0	18571.0	-13.9	-23.7	43.0
435.8	21938.9	-21.9	-30.1	47.0
400.0	23986.2	-20.7	-30.8	68.0
335.8	28030.2	-37.7	-43.3	55.0
300.0	30544.5	-43.4	-49.2	52.0
250.0	34508.0	-49.3		
239.8	35396.9	-51.6		
227.8	36492.3	-49.3		
200.0	39272.1	-51.1		
183.8	41055.5	-54.3		
160.3	43910.5	-50.1		
150.0	45282.9	-58.5		
129.3	48318.2	-60.7		
113.8	50880.5	-66.2		

GEODETIC COORDINATE
32.40043 LAT DE
106.37033 LON DE

SIGNIFICANT LEVEL DATA
U190020049
WHITE SANDS
TABLE IV. (CONT)

STATION ALTITUDE 3989.00 FEET MSL
19 JAN. 78
ASCENSION NO. 49

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE		REL. HUM. PERCENT
	AIR DEGREES	DEWPOINT CENTIGRADE	
100.0 53413.9	-70.4		
70.0 60376.6	-67.6		
50.0 67022.7	-65.3		
30.0 77279.9	-60.4		
23.8 81986.0	-59.6		
20.0 85557.2	-56.0		
10.0 100233.6	-45.9		
9.8 100670.4	-46.2		

UPPER AIR DATA
 C190020049
 WHITE SANDS
 TABLE V.

STATION ALTITUDE 3989.00 FEET MSL
 19 JAN. 78
 0820 HRS MST
 ASCENSION NO. 49

GEODETIC COORDINATES
 32.40043 LAT NFG
 106.37033 LON NEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
3989.0	664.3	-2.3	-7.2	69.0	1135.7	641.6	180.0	1.9	1.000271
4000.0	883.9	-2.3	-7.3	68.4	1135.2	641.6	179.0	2.0	1.000271
4200.0	877.3	-2.3	-9.7	56.6	1126.9	641.6	165.0	2.6	1.000266
4400.0	870.6	-2.7	-10.1	56.8	1120.1	641.0	156.6	3.3	1.000264
4600.0	863.9	-3.3	-9.8	60.4	1113.7	640.4	151.2	4.0	1.000263
4800.0	857.3	-3.8	-9.6	64.0	1107.3	639.8	147.5	4.8	1.000262
5000.0	850.7	-4.3	-9.4	67.6	1101.0	639.2	144.9	5.6	1.000261
5200.0	844.1	-4.9	-9.4	70.5	1094.7	638.5	142.9	6.4	1.000260
5400.0	837.6	-5.4	-9.4	73.4	1088.4	637.9	141.4	7.2	1.000258
5600.0	831.1	-6.0	-9.5	76.2	1082.1	637.2	140.1	8.0	1.000257
5800.0	824.7	-6.0	-9.1	78.6	1073.9	637.2	139.1	8.8	1.000256
6000.0	818.3	-5.1	-8.0	80.2	1062.0	638.3	138.3	9.6	1.000254
6200.0	812.0	-4.8	-7.5	81.7	1052.5	638.7	138.8	9.3	1.000253
6400.0	805.7	-5.1	-7.5	83.1	1045.4	638.4	140.8	8.1	1.000251
6600.0	799.5	-5.4	-7.5	84.5	1038.3	638.0	143.5	6.9	1.000250
6800.0	793.3	-5.6	-7.6	85.9	1031.3	637.7	147.4	5.7	1.000248
7000.0	787.2	-5.9	-7.6	87.3	1024.3	637.4	153.3	4.5	1.000246
7200.0	781.1	-6.1	-7.7	88.7	1017.4	637.1	159.5	3.9	1.000245
7400.0	775.0	-5.2	-6.2	92.3	1005.7	638.3	166.3	3.6	1.000244
7600.0	769.1	-3.9	-4.4	96.4	992.8	640.0	174.6	3.3	1.000244
7800.0	763.2	-3.4	-4.3	93.3	983.3	640.6	184.2	3.0	1.000242
8000.0	757.3	-3.3	-5.3	85.8	975.7	640.6	195.1	2.9	1.000239
8200.0	751.5	-3.2	-6.5	78.3	968.1	640.6	200.5	3.0	1.000235
8400.0	745.7	-3.2	-7.7	70.8	960.6	640.6	204.0	3.2	1.000232
8600.0	740.0	-3.1	-9.1	63.2	953.2	640.7	207.1	3.4	1.000228
8800.0	734.3	-3.2	-9.9	59.9	946.4	640.5	209.8	3.6	1.000226
9000.0	728.7	-3.6	-9.8	62.0	940.2	640.1	212.2	3.8	1.000225
9200.0	723.1	-3.9	-9.7	64.0	934.1	639.8	212.5	4.4	1.000223
9400.0	717.5	-4.2	-9.6	65.8	928.0	639.4	212.2	5.1	1.000222
9600.0	712.0	-4.5	-10.8	61.2	921.8	639.0	212.0	5.7	1.000219

UPPER AIR DATA
 C190020049
 WHITE SANDS
 TABLE V. (CONT)

STATION ALTITUDE 3989.00 FEET MSL
 14 JAN. 78 0820 HRS MST
 ASCENSION NO. 44

GEODETIC COORDINATE
 32.40043 LAT NE
 106.37033 LON DE

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
9600.0	706.5	-4.7	-12.0	56.5	915.7	638.7	211.9	6.4	1.000217
10000.0	701.1	-5.0	-13.3	51.9	909.5	638.4	211.7	7.1	1.000214
10200.0	695.6	-5.3	-14.0	50.5	903.8	637.9	212.9	7.3	1.000212
10400.0	690.2	-5.7	-14.5	49.9	898.2	637.4	214.1	7.6	1.000211
10600.0	684.9	-6.1	-15.0	49.4	892.6	636.9	215.2	7.8	1.000209
10800.0	679.6	-6.6	-15.5	48.8	887.1	636.4	216.3	8.0	1.000207
11000.0	674.3	-7.0	-16.0	48.2	881.6	635.9	217.3	8.3	1.000206
11200.0	669.0	-7.2	-16.7	46.2	875.5	635.6	223.6	8.6	1.000204
11400.0	663.8	-7.3	-17.5	43.5	869.1	635.5	229.4	8.9	1.000202
11600.0	658.6	-7.4	-18.4	40.9	862.7	635.3	234.8	9.4	1.000200
11800.0	653.5	-7.5	-19.3	38.2	856.4	635.2	239.6	9.9	1.000198
12000.0	648.4	-7.6	-20.1	36.0	850.2	635.0	243.9	10.5	1.000196
12200.0	643.3	-7.9	-20.4	35.8	844.3	634.7	248.2	11.0	1.000195
12400.0	638.3	-8.2	-20.7	35.6	838.6	634.4	252.3	11.6	1.000193
12600.0	633.3	-8.4	-21.0	35.4	832.8	634.0	255.9	12.3	1.000192
12800.0	628.3	-8.7	-21.3	35.3	827.1	633.7	259.2	12.9	1.000190
13000.0	623.4	-9.0	-21.6	35.1	821.5	633.4	262.1	13.6	1.000189
13200.0	618.5	-9.2	-21.9	34.9	815.9	633.1	265.7	13.9	1.000188
13400.0	613.6	-9.5	-22.2	34.7	810.3	632.8	269.8	13.9	1.000186
13600.0	608.8	-9.8	-22.5	34.5	804.8	632.4	274.0	13.9	1.000185
13800.0	604.0	-10.1	-22.8	34.4	799.3	632.1	278.1	14.0	1.000183
14000.0	599.3	-10.3	-23.1	34.2	793.8	631.8	282.1	14.2	1.000182
14200.0	594.6	-10.6	-23.4	34.0	788.4	631.5	286.3	14.4	1.000181
14400.0	589.9	-10.1	-23.1	33.5	780.7	632.0	290.8	14.8	1.000179
14600.0	585.2	-9.6	-22.8	32.9	773.0	632.7	295.1	15.3	1.000177
14800.0	580.6	-9.0	-22.5	32.3	765.3	633.3	299.1	15.9	1.000176
15000.0	576.1	-8.6	-21.8	33.6	758.2	633.8	302.8	16.5	1.000175
15200.0	571.6	-8.5	-20.3	37.8	751.8	634.0	305.3	17.4	1.000174
15400.0	567.1	-8.4	-19.0	42.0	745.5	634.2	305.7	18.8	1.000173
15600.0	562.6	-8.3	-17.7	46.2	739.2	634.4	306.1	20.1	1.000173

STATION ALTITUDE 3969.00 FEET MSL
19 JAN. 78
ASCENSION NO. 49

UPPER AIR DATA
0190020049
WHITE SANDS
TABLE V. (CONT)

GEODETTIC COORDINATES
32.40043 LAT DEG
106.37053 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
							DIRECTION DEGREES (TN)	SPEED KNOTS	
15600.0	556.2	-8.5	-17.4	48.2	733.9	634.1	306.5	21.5	1.000172
16000.0	553.8	-8.9	-17.8	48.5	729.4	633.6	306.8	22.8	1.000171
16200.0	549.5	-9.4	-18.1	48.9	724.9	633.1	306.1	23.9	1.000169
16400.0	545.2	-9.8	-18.4	49.2	720.5	632.5	304.6	24.6	1.000168
16600.0	540.9	-10.3	-18.8	49.5	716.0	632.0	303.1	25.3	1.000167
16800.0	536.6	-10.7	-19.1	49.9	711.6	631.4	301.7	26.0	1.000166
17000.0	532.4	-11.1	-19.5	49.5	707.1	630.9	300.3	26.7	1.000165
17200.0	528.1	-11.5	-20.1	48.7	702.4	630.5	299.5	27.0	1.000163
17400.0	523.9	-11.8	-20.6	47.9	697.5	630.1	299.1	26.7	1.000162
17600.0	519.6	-12.2	-21.1	47.0	693.2	629.6	298.7	26.5	1.000161
17800.0	515.6	-12.5	-21.7	46.2	688.7	629.2	298.2	26.2	1.000159
18000.0	511.5	-12.9	-22.2	45.4	684.2	628.7	297.8	26.0	1.000158
18200.0	507.5	-13.2	-22.7	44.5	679.7	628.3	297.8	25.8	1.000157
18400.0	503.4	-13.6	-23.3	43.7	675.2	627.9	298.2	25.6	1.000156
18600.0	499.4	-14.0	-23.8	43.0	670.3	627.4	298.7	25.5	1.000154
18800.0	495.3	-14.4	-24.2	43.3	666.6	626.8	299.1	25.3	1.000153
19000.0	491.3	-14.9	-24.5	43.5	662.4	626.2	299.5	25.1	1.000152
19200.0	487.3	-15.4	-24.9	43.7	658.2	625.7	298.9	25.3	1.000151
19400.0	483.4	-15.9	-25.3	44.0	654.1	625.1	297.7	25.6	1.000150
19600.0	479.4	-16.3	-25.7	44.2	650.0	624.5	296.4	26.1	1.000149
19800.0	475.5	-16.8	-26.0	44.5	645.9	623.9	295.2	26.5	1.000148
20000.0	471.7	-17.3	-26.4	44.7	641.9	623.3	294.1	26.9	1.000147
20200.0	467.8	-17.8	-26.8	44.9	637.8	622.7	292.9	27.3	1.000146
20400.0	464.0	-18.2	-27.2	45.2	633.8	622.2	291.7	27.7	1.000145
20600.0	460.3	-18.7	-27.6	45.4	629.9	621.6	290.5	28.1	1.000144
20800.0	456.5	-19.2	-27.9	45.6	625.9	621.0	289.3	28.6	1.000143
21000.0	452.8	-19.7	-28.3	45.9	622.0	620.4	288.2	29.0	1.000142
21200.0	449.1	-20.1	-28.7	46.1	618.1	619.8	288.3	29.1	1.000141
21400.0	445.5	-20.6	-29.1	46.4	614.3	619.2	289.0	28.9	1.000140
21600.0	441.9	-21.1	-29.5	46.6	610.4	618.6	289.7	28.8	1.000139

UPPER AIR DATA
 0190020049
 WHITE SANDS
 TABLE V. (CONT)

STATION ALTITUDE 3989.00 FEET MSL
 19 JAN. 78
 ASCENSION NO. 49

GEODETIC COORDINATE
 32.40043 LAT DE
 106.37033 LON DE

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
							DIRECTION DEGREES (TN)	SPEED KNOTS	
21600.0	436.3	-21.6	-29.9	46.8	606.6	618.1	290.4	28.6	1.000138
22000.0	434.7	-22.0	-30.1	47.6	602.8	617.5	291.2	28.5	1.000137
22200.0	431.1	-22.5	-30.1	49.7	598.9	616.9	291.7	28.2	1.000136
22400.0	427.5	-23.0	-30.1	51.7	595.0	616.3	292.3	28.0	1.000136
22600.0	423.9	-23.5	-30.2	53.8	591.1	615.7	292.8	27.8	1.000135
22800.0	420.4	-23.9	-30.2	55.8	587.3	615.2	293.3	27.5	1.000134
23000.0	416.9	-24.4	-30.3	57.9	583.5	614.6	293.9	27.3	1.000133
23200.0	413.4	-24.9	-30.3	59.9	579.7	614.0	292.5	27.6	1.000132
23400.0	409.9	-25.3	-30.4	62.0	576.0	613.4	291.0	27.9	1.000131
23600.0	406.5	-25.8	-30.6	64.0	572.3	612.8	289.6	28.1	1.000130
23800.0	403.1	-26.3	-30.7	66.1	568.6	612.3	288.2	28.5	1.000130
24000.0	399.8	-26.7	-30.8	68.0	564.9	611.7	287.0	28.9	1.000129
24200.0	396.3	-27.3	-31.5	67.3	561.3	611.0	286.4	29.9	1.000128
24400.0	392.9	-27.8	-32.1	66.7	557.7	610.3	285.8	30.8	1.000127
24600.0	389.5	-28.4	-32.7	66.0	554.1	609.6	285.3	31.8	1.000126
24800.0	386.2	-28.9	-33.3	65.4	550.6	608.9	284.8	32.8	1.000125
25000.0	382.8	-29.5	-33.9	64.7	547.1	608.3	284.3	33.6	1.000124
25200.0	379.5	-30.0	-34.6	64.1	543.6	607.6	284.4	34.5	1.000123
25400.0	376.3	-30.5	-35.2	63.5	540.1	606.9	284.7	35.1	1.000122
25600.0	373.0	-31.1	-35.8	62.8	536.7	606.2	284.9	35.8	1.000121
25800.0	369.8	-31.6	-36.4	62.2	533.3	605.5	285.1	36.4	1.000121
26000.0	366.6	-32.2	-37.0	61.5	529.9	604.8	285.3	37.0	1.000120
26200.0	363.5	-32.7	-37.7	60.9	526.5	604.1	285.6	37.7	1.000119
26400.0	360.3	-33.3	-38.3	60.2	523.2	603.5	285.2	38.4	1.000118
26600.0	357.2	-33.8	-38.9	59.6	519.8	602.8	284.8	39.2	1.000117
26800.0	354.2	-34.4	-39.5	59.0	516.5	602.1	284.4	40.0	1.000116
27000.0	351.1	-34.9	-40.1	58.3	513.3	601.4	284.0	40.7	1.000116
27200.0	348.1	-35.4	-40.8	57.7	510.0	600.7	283.7	41.5	1.000115
27400.0	345.1	-36.0	-41.4	57.0	506.8	600.0	283.3	42.9	1.000114
27600.0	342.1	-36.5	-42.0	56.4	503.6	599.3	283.0	44.4	1.000113

UPPER AIR DATA
0190020049
WHITE SANDS
TABLE V. (CONT)

STATION ALTITUDE 3989.00 FEET MSL
14 JAN. 78
ASCENSION NO. 49

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
27800.0	339.2	-37.1	55.7	500.4	598.6	282.8	45.9	1.000112
28000.0	336.2	-37.6	55.1	497.2	597.9	282.5	47.4	1.000112
28200.0	333.3	-38.1	54.8	493.8	597.3	282.3	48.9	1.000111
28400.0	330.3	-38.5	54.6	490.4	596.8	281.8	50.0	1.000110
28600.0	327.3	-39.0	54.3	486.9	596.2	281.4	52.4	1.000109
28800.0	324.4	-39.4	54.1	483.5	595.6	281.0	54.2	1.000108
29000.0	321.5	-39.9	53.8	480.1	595.0	280.6	56.0	1.000108
29200.0	318.6	-40.4	53.6	476.8	594.4	280.2	57.8	1.000107
29400.0	315.8	-40.8	53.4	473.4	593.9	279.5	59.7	1.000106
29600.0	313.0	-41.3	53.1	470.1	593.3	278.6	61.7	1.000105
29800.0	310.2	-41.7	52.9	466.8	592.7	277.9	63.7	1.000105
30000.0	307.4	-42.2	52.6	463.6	592.1	277.1	65.7	1.000104
30200.0	304.7	-42.6	52.4	460.4	591.5	276.4	67.8	1.000103
30400.0	302.0	-43.1	52.2	457.1	591.0	275.7	70.2	1.000102
30600.0	299.2	-43.5	51.3**	453.8	590.4	274.8	73.3	1.000102
30800.0	296.5	-43.8	46.6**	450.3	590.0	274.0	76.3	1.000101
31000.0	293.8	-44.1	46.0**	446.7	589.7	273.3	79.4	1.000100
31200.0	291.1	-44.4	45.4**	443.2	589.3	272.7	82.4	1.000099
31400.0	288.4	-44.7	40.8**	439.7	588.9	272.1	85.1	1.000098
31600.0	285.8	-45.0	36.2**	436.3	588.5	271.7	86.4	1.000097
31800.0	283.2	-45.3	35.5**	432.9	588.1	271.3	87.6	1.000097
32000.0	280.6	-45.6	34.9**	429.5	587.7	270.9	88.9	1.000096
32200.0	278.0	-45.9	30.3**	426.1	587.3	270.5	90.1	1.000095
32400.0	275.5	-46.2	27.7**	422.7	587.0	270.2	91.4	1.000094
32600.0	272.9	-46.5	25.0**	419.4	586.6	270.2	93.0	1.000094
32800.0	270.4	-46.8	22.4**	416.1	586.2	270.3	94.6	1.000093
33000.0	268.0	-47.1	19.8**	412.9	585.8	270.3	96.2	1.000092
33200.0	265.5	-47.4	17.2**	409.6	585.4	270.3	97.7	1.000091
33400.0	263.1	-47.7	14.5**	406.4	585.0	270.4	99.3	1.000091
33600.0	260.7	-47.9	11.9**	403.2	584.6	270.6	101.5	1.000090

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

UPPER AIR DATA
 C190020049
 WHITE SANDS
 TABLE V. (CONT)

STATION ALTITUDE 3989.00 FEET MSL
 19 JAN. 78
 ASCENSION NO. 49

GEOMETRIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT DEGREES	REL. HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
33800.0	258.3	-48.2	-66.9	9.3**	400.1	584.2	270.8	103.8	1.000089
34000.0	255.9	-48.5	-69.5	6.7**	396.9	583.9	271.0	106.1	1.000086
34200.0	253.6	-48.8	-73.1	4.0**	393.8	583.5	271.2	108.5	1.000088
34400.0	251.2	-49.1	-79.9	1.4**	390.7	583.1	271.4	110.8	1.000087
34600.0	248.9	-49.5			387.8	582.6	271.6	111.8	1.000086
34800.0	246.6	-50.1			385.1	581.9	271.8	111.7	1.000086
35000.0	244.3	-50.6			382.4	581.2	272.0	111.5	1.000085
35200.0	242.0	-51.1			379.7	580.5	272.2	111.4	1.000085
35400.0	239.8	-51.6			377.0	579.9	272.4	111.3	1.000084
35600.0	237.5	-51.2			372.6	580.4	272.7	111.1	1.000083
35800.0	235.3	-50.8			368.6	581.0	272.9	110.6	1.000082
36000.0	233.1	-50.3			364.5	581.5	273.2	110.1	1.000081
36200.0	230.9	-49.9			360.4	582.1	273.5	109.6	1.000080
36400.0	228.8	-49.5			356.4	582.6	273.7	109.1	1.000079
36600.0	226.7	-49.4			352.8	582.6	274.0	108.6	1.000079
36800.0	224.5	-49.5			349.8	582.6	274.0	107.8	1.000076
37000.0	222.4	-49.6			346.7	582.4	274.0	107.0	1.000077
37200.0	220.4	-49.8			343.7	582.3	274.0	106.2	1.000077
37400.0	218.3	-49.9			340.7	582.1	274.0	105.4	1.000076
37600.0	216.3	-50.0			337.7	581.9	274.0	104.6	1.000075
37800.0	214.3	-50.1			334.7	581.6	274.0	103.8	1.000075
38000.0	212.3	-50.3			331.8	581.6	274.0	102.9	1.000074
38200.0	210.3	-50.4			328.9	581.4	274.0	102.0	1.000073
38400.0	208.3	-50.5			326.0	581.3	274.0	101.2	1.000073
38600.0	206.4	-50.7			323.2	581.1	274.0	100.3	1.000072
38800.0	204.5	-50.8			320.3	580.9	274.0	99.4	1.000071
39000.0	202.6	-50.9			317.5	580.6	274.1	98.6	1.000071
39200.0	200.7	-51.1			314.8	580.6	274.2	98.2	1.000070
39400.0	198.8	-51.3			312.2	580.2	274.3	97.6	1.000070
39600.0	196.9	-51.7			309.8	579.8	274.3	97.0	1.000069

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

GEOMETRIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

UPPER AIR DATA
0190020049
WHITE SANDS
TABLE V. (CONT)

STATION ALTITUDE 3989.00 FEET MSL
15 JAN. 78
ASCENSION NO. 49
0820 HRS MST

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND		WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNOTS	KNOTS			
39800.0	195.1	-52.0			307.3	575.3		274.4	96.3	1.000066
40000.0	193.2	-52.4			304.9	578.8		274.3	95.7	1.000068
40200.0	191.4	-52.8			302.5	578.5		274.1	95.1	1.000067
40400.0	189.6	-53.1			300.2	577.9		273.9	94.5	1.000067
40600.0	187.8	-53.5			297.8	577.4		273.7	93.9	1.000066
40800.0	186.0	-53.8			295.5	576.9		273.5	93.2	1.000066
41000.0	184.3	-54.2			293.2	576.5		273.3	92.5	1.000065
41200.0	182.5	-54.4			290.7	576.2		273.1	91.6	1.000065
41400.0	180.8	-54.5			288.1	576.0		273.0	90.6	1.000064
41600.0	179.1	-54.6			285.5	575.9		272.8	89.7	1.000064
41800.0	177.4	-54.8			282.9	575.7		272.7	88.8	1.000063
42000.0	175.7	-54.9			280.4	575.5		272.6	88.1	1.000062
42200.0	174.0	-55.0			277.9	575.4		272.8	88.1	1.000062
42400.0	172.3	-55.1			275.4	575.2		273.1	88.0	1.000061
42600.0	170.7	-55.3			272.9	575.0		273.3	88.0	1.000061
42800.0	169.1	-55.4			270.5	574.9		273.5	87.9	1.000060
43000.0	167.4	-55.5			268.0	574.7		273.7	87.9	1.000060
43200.0	165.9	-55.7			265.6	574.5		273.9	87.8	1.000059
43400.0	164.3	-55.8			263.3	574.4		274.2	87.8	1.000059
43600.0	162.7	-55.9			260.9	574.2		274.4	87.7	1.000058
43800.0	161.2	-56.0			258.6	574.0		274.6	87.7	1.000058
44000.0	159.6	-56.3			256.4	573.7		274.8	87.6	1.000057
44200.0	158.1	-56.6			254.3	573.3		274.9	87.1	1.000057
44400.0	156.5	-57.0			252.3	572.8		274.9	85.4	1.000056
44600.0	155.0	-57.3			250.2	572.4		274.9	83.7	1.000056
44800.0	153.5	-57.7			248.2	571.9		274.9	82.0	1.000055
45000.0	152.1	-58.0			246.2	571.4		274.8	80.4	1.000055
45200.0	150.6	-58.4			244.3	571.0		274.8	78.7	1.000054
45400.0	149.1	-58.6			242.1	570.7		274.8	76.4	1.000054
45600.0	147.7	-58.7			240.0	570.5		274.7	74.0	1.000053

UPPER AIR DATA
0190020049
WHITE SANDS
TABLE V. (CONT)

STATION ALTITUDE 3989.00 FEET MSL
19 JAN. 78
ASCENSION NO. 49
0820 HRS MST

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES (TN)	SPEED KNOTS	
45800.0	146.3	-58.9		237.8	570.3	274.7	71.5	1.000053
46000.0	144.8	-59.0		235.6	570.1	274.6	69.0	1.000052
46200.0	143.4	-59.2		233.5	569.9	274.6	66.6	1.000052
46400.0	142.0	-59.3		231.4	569.7	274.5	64.2	1.000052
46600.0	140.6	-59.5		229.3	569.5	274.5	62.2	1.000051
46800.0	139.3	-59.6		227.2	569.3	274.5	60.3	1.000051
47000.0	137.9	-59.7		225.1	569.1	274.4	58.3	1.000050
47200.0	136.6	-59.9		223.1	568.9	274.4	56.4	1.000050
47400.0	135.2	-60.0		221.1	568.7	274.3	54.4	1.000049
47600.0	133.9	-60.2		219.1	568.5	273.8	53.6	1.000049
47800.0	132.6	-60.3		217.1	568.3	273.2	53.0	1.000048
48000.0	131.3	-60.5		215.1	568.1	272.6	52.4	1.000048
48200.0	130.1	-60.6		213.2	568.0	272.0	51.8	1.000047
48400.0	128.8	-60.9		211.3	567.6	271.4	51.2	1.000047
48600.0	127.5	-61.3		209.7	567.0	270.7	51.1	1.000047
48800.0	126.2	-61.7		208.0	566.5	270.0	51.4	1.000046
49000.0	125.0	-62.2		206.4	565.9	269.4	51.7	1.000046
49200.0	123.7	-62.6		204.7	565.3	268.7	52.1	1.000046
49400.0	122.5	-63.0		203.1	564.7	268.0	52.4	1.000045
49600.0	121.3	-63.5		201.5	564.1	267.4	52.8	1.000045
49800.0	120.1	-63.9		199.9	563.6	267.5	52.9	1.000045
50000.0	118.9	-64.3		198.3	563.0	267.7	52.9	1.000044
50200.0	117.7	-64.7		196.8	562.4	267.9	53.0	1.000044
50400.0	116.6	-65.2		195.2	561.8	268.1	53.0	1.000043
50600.0	115.4	-65.6		193.7	561.3	268.3	53.0	1.000043
50800.0	114.3	-66.0		192.2	560.7	268.7	53.1	1.000043
51000.0	113.1	-66.4		190.6	560.2	269.4	53.0	1.000042
51200.0	112.0	-66.7		188.9	559.7	270.2	53.0	1.000042
51400.0	110.8	-67.1		187.3	559.3	271.0	52.9	1.000042
51600.0	109.7	-67.4		185.7	558.8	271.8	52.9	1.000041

UPPER AIR DATA

STATION ALTITUDE 3989.00 FEET MSL
19 JAN. 76
ASCENSION NO. 49

0190020049
WHITE SANDS
TABLE V. (CONT)

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES DEWPOINT DEGREES CENTIGRADE	RFL.HUM. PERCENT	DENSITY GP/CUPIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TP)	SPEED KNOTS	INDEX OF REFRACTION
51600.0	106.6	-67.7		164.1	558.4	272.5	52.9	1.000041
52000.0	107.5	-68.1		182.6	557.9	273.2	52.9	1.000041
52200.0	106.4	-68.4		161.0	557.5	273.9	53.0	1.000040
52400.0	105.3	-68.7		179.5	557.0	274.5	53.0	1.000040
52600.0	104.2	-69.1		177.9	556.6	275.2	53.0	1.000040
52800.0	103.2	-69.4		176.4	556.1	275.8	53.1	1.000039
53000.0	102.1	-69.7		174.9	555.7	276.4	53.2	1.000039
53200.0	101.1	-70.0		173.4	555.2	276.9	52.4	1.000039
53400.0	100.1	-70.4		171.9	554.6	277.3	51.4	1.000038
53600.0	99.1	-70.3		170.1	554.8	277.7	50.5	1.000038
53800.0	98.0	-70.2		168.3	554.9	278.1	49.6	1.000037
54000.0	97.0	-70.2		166.5	555.0	278.6	48.7	1.000037
54200.0	96.1	-70.1		164.8	555.2	279.0	47.6	1.000037
54400.0	95.1	-70.0		163.0	555.3	279.1	45.8	1.000036
54600.0	94.1	-69.9		161.3	555.4	279.3	44.0	1.000036
54800.0	93.1	-69.6		159.6	555.5	279.5	42.1	1.000036
55000.0	92.2	-69.8		157.9	555.6	279.7	40.3	1.000035
55200.0	91.3	-69.7		156.2	555.7	279.9	38.4	1.000035
55400.0	90.3	-69.6		154.6	555.8	279.9	36.4	1.000034
55600.0	89.4	-69.5		153.0	555.9	279.6	34.1	1.000034
55800.0	88.5	-69.4		151.3	556.0	279.2	31.6	1.000034
56000.0	87.6	-69.4		149.7	556.1	278.8	29.6	1.000033
56200.0	86.7	-69.3		148.1	556.3	278.4	27.3	1.000033
56400.0	85.8	-69.2		146.6	556.4	277.8	25.1	1.000033
56600.0	84.9	-69.1		145.0	556.5	277.2	22.6	1.000032
56800.0	84.1	-69.0		143.5	556.6	276.3	20.1	1.000032
57000.0	83.2	-69.0		142.0	556.7	275.3	17.6	1.000032
57200.0	82.4	-68.9		140.5	556.8	273.9	15.2	1.000031
57400.0	81.5	-68.8		139.0	556.9	271.9	12.7	1.000031
57600.0	80.7	-68.7		137.5	557.0	270.0	10.7	1.000031

UPPER AIR DATA
0190020049
WHITE SANDS
TABLE V. (CONT)

STATION ALTITUDE 3989.00 FEET MSL
19 JAN. 78
ASCENSION NO. 49

GEODETIC COORDINATES
32.40043 LAT DEG
106.37053 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC FEET	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES (TN)	SPEED KNOTS	
57800.0	79.9	-68.6		136.1	557.1	271.1	10.0	1.000030
58000.0	79.1	-68.6		134.6	557.2	272.3	9.4	1.000030
58200.0	78.3	-68.5		133.2	557.4	273.7	8.7	1.000030
58400.0	77.5	-68.4		131.8	557.5	275.4	8.1	1.000029
58600.0	76.7	-68.3		130.4	557.6	277.3	7.4	1.000029
58800.0	75.9	-68.2		129.0	557.7	280.8	6.1	1.000029
59000.0	75.1	-68.2		127.6	557.8	284.1	9.7	1.000026
59200.0	74.3	-68.1		126.3	557.9	286.4	11.4	1.000026
59400.0	73.6	-68.0		125.0	558.0	288.1	13.1	1.000026
59600.0	72.8	-67.9		123.6	558.1	289.5	14.8	1.000026
59800.0	72.1	-67.8		122.3	558.2	290.5	16.5	1.000027
60000.0	71.4	-67.8		121.0	558.3	290.8	17.7	1.000027
60200.0	70.6	-67.7		119.6	558.4	291.0	18.8	1.000027
60400.0	69.9	-67.6		118.5	558.6	291.2	19.9	1.000026
60600.0	69.2	-67.5		117.3	558.6	291.4	21.0	1.000026
60800.0	68.5	-67.5		116.0	558.7	291.6	22.2	1.000026
61000.0	67.8	-67.4		114.8	558.8	291.8	23.0	1.000026
61200.0	67.1	-67.3		113.6	558.9	292.3	22.3	1.000025
61400.0	66.5	-67.2		112.5	559.0	292.9	21.6	1.000025
61600.0	65.8	-67.2		111.3	559.1	293.6	20.9	1.000025
61800.0	65.1	-67.1		110.1	559.2	294.2	20.2	1.000025
62000.0	64.5	-67.0		109.0	559.3	295.0	19.5	1.000024
62200.0	63.8	-67.0		107.8	559.4	295.9	18.7	1.000024
62400.0	63.2	-66.9		106.7	559.5	298.0	17.3	1.000024
62600.0	62.5	-66.8		105.6	559.6	300.6	15.9	1.000024
62800.0	61.9	-66.8		104.5	559.7	303.6	14.6	1.000023
63000.0	61.3	-66.7		103.4	559.8	307.2	13.3	1.000023
63200.0	60.7	-66.6		102.3	559.9	311.6	12.1	1.000023
63400.0	60.1	-66.6		101.3	560.0	316.8	11.0	1.000023
63600.0	59.5	-66.5		100.2	560.1	318.8	10.7	1.000022

STATION ALTITUDE 3969.00 FEET MSL
 19 JAN. 76
 ASCENSION NO. 49

UPPER AIR DATA
 0190020049
 WHITE SANDS
 TABLE V. (CONT)

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES(TN)	SPEED KNOTS	
63800.0	58.9	-66.4		99.2	560.1	320.8	10.4	1.000022
64000.0	58.3	-66.3		98.2	560.2	323.0	10.2	1.000022
64200.0	57.7	-66.3		97.1	560.3	325.3	10.0	1.000022
64400.0	57.1	-66.2		96.1	560.4	327.7	9.8	1.000021
64600.0	56.5	-66.1		95.1	560.5	330.2	9.6	1.000021
64800.0	56.0	-66.1		94.1	560.6	329.1	9.7	1.000021
65000.0	55.4	-66.0		93.2	560.7	327.8	9.9	1.000021
65200.0	54.8	-65.9		92.2	560.8	326.5	10.1	1.000021
65400.0	54.3	-65.9		91.2	560.9	325.3	10.3	1.000020
65600.0	53.7	-65.8		90.3	561.0	324.1	10.5	1.000020
65800.0	53.2	-65.7		89.3	561.1	322.9	10.6	1.000020
66000.0	52.7	-65.7		88.4	561.2	321.9	10.8	1.000020
66200.0	52.1	-65.6		87.5	561.3	322.3	10.9	1.000019
66400.0	51.6	-65.5		86.6	561.4	323.1	10.9	1.000019
66600.0	51.1	-65.4		85.7	561.5	323.9	10.9	1.000019
66800.0	50.6	-65.4		84.8	561.6	324.7	10.9	1.000019
67000.0	50.1	-65.3		83.9	561.6	325.5	10.9	1.000019
67200.0	49.6	-65.2		83.0	561.6	326.3	11.0	1.000018
67400.0	49.1	-65.1		82.2	561.9	327.1	11.0	1.000018
67600.0	48.6	-65.0		81.3	562.0	328.4	11.0	1.000018
67800.0	48.1	-64.9		80.5	562.2	330.6	10.9	1.000018
68000.0	47.6	-64.8		79.6	562.3	332.7	10.9	1.000018
68200.0	47.2	-64.7		78.8	562.4	334.9	10.8	1.000018
68400.0	46.7	-64.6		78.0	562.5	337.1	10.8	1.000017
68600.0	46.2	-64.5		77.2	562.7	339.3	10.8	1.000017
68800.0	45.8	-64.5		76.4	562.8	341.5	10.8	1.000017
69000.0	45.3	-64.4		75.6	562.9	343.7	10.9	1.000017
69200.0	44.9	-64.3		74.8	563.1	345.1	10.9	1.000017
69400.0	44.4	-64.2		74.0	563.2	346.5	10.9	1.000016
69600.0	44.0	-64.1		73.3	563.3	347.9	10.9	1.000016

UPPER AIR DATA
 C190020049
 WHITE SANDS
 TABLE V. (CONT)

STATION ALTITUDE 3989.00 FEET MSL
 19 JAN. 78 0820 HRS MST
 ASCENSION NO. 44

GEODETIC COORDINATES
 32.43043 LAT DEG
 106.57033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES (TN)	SPEED KNOTS	
69800.0	43.5	-64.0		72.5	563.4	349.2	10.9	1.000016
70000.0	43.1	-63.9		71.8	563.6	350.6	11.0	1.000016
70200.0	42.7	-63.8		71.0	563.7	351.9	11.0	1.000016
70400.0	42.3	-63.7		70.3	563.8	353.3	11.1	1.000016
70600.0	41.8	-63.6		69.6	564.0	353.1	11.2	1.000015
70800.0	41.4	-63.5		68.8	564.1	350.3	11.6	1.000015
71000.0	41.0	-63.4		68.1	564.2	347.7	12.0	1.000015
71200.0	40.6	-63.3		67.4	564.3	345.2	12.4	1.000015
71400.0	40.2	-63.2		66.7	564.5	342.9	12.8	1.000015
71600.0	39.8	-63.1		66.0	564.6	340.8	13.3	1.000015
71800.0	39.4	-63.0		65.3	564.7	338.8	13.8	1.000015
72000.0	39.0	-62.9		64.7	564.9	336.9	14.3	1.000014
72200.0	38.6	-62.8		64.0	565.0	334.4	15.2	1.000014
72400.0	38.3	-62.7		63.3	565.1	332.0	16.2	1.000014
72600.0	37.9	-62.6		62.7	565.2	329.8	17.2	1.000014
72800.0	37.5	-62.5		62.0	565.4	327.9	18.3	1.000014
73000.0	37.1	-62.4		61.4	565.5	326.2	19.4	1.000014
73200.0	36.8	-62.3		60.7	565.6	324.7	20.5	1.000014
73400.0	36.4	-62.3		60.1	565.8	323.4	21.6	1.000013
73600.0	36.0	-62.2		59.5	565.9	322.9	22.4	1.000013
73800.0	35.7	-62.1		58.9	566.0	325.5	21.8	1.000013
74000.0	35.3	-62.0		58.3	566.1	328.2	21.3	1.000013
74200.0	35.0	-61.9		57.7	566.3	331.0	20.8	1.000013
74400.0	34.6	-61.8		57.1	566.4	334.0	20.4	1.000013
74600.0	34.3	-61.7		56.5	566.5	337.1	20.0	1.000013
74800.0	33.9	-61.6		55.9	566.7	340.3	19.7	1.000012
75000.0	33.6	-61.5		55.3	566.8	343.6	19.4	1.000012
75200.0	33.3	-61.4		54.7	566.9	347.1	19.0	1.000012
75400.0	32.9	-61.3		54.2	567.0	350.8	18.6	1.000012
75600.0	32.6	-61.2		53.6	567.2	354.6	18.3	1.000012

GEOPETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

UPPER AIR DATA
C190020049
WHITE SANDS
TABLE V. (CONT)

STATION ALTITUDE 3989.00 FEET MSL
14 JAN. 78 0820 HRS MST
ASCENSION NO. 44

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNOTS	KNOTS	DIRECTION DEGREES(TN)	SPEED KNOTS	
75800.0	32.3	-61.1			53.1	567.3		358.6	18.0	1.000012
76000.0	32.0	-61.0			52.5	567.4		2.6	17.9	1.000012
76200.0	31.7	-60.9			52.0	567.5		6.7	17.8	1.000012
76400.0	31.3	-60.8			51.4	567.7		10.8	17.8	1.000011
76600.0	31.0	-60.7			50.9	567.8		14.6	17.9	1.000011
76800.0	30.7	-60.6			50.4	567.9		13.9	17.9	1.000011
77000.0	30.4	-60.5			49.8	568.1		13.3	17.8	1.000011
77200.0	30.1	-60.4			49.3	568.2		12.6	17.8	1.000011
77400.0	29.8	-60.4			48.8	568.3		11.9	17.8	1.000011
77600.0	29.5	-60.4			48.3	568.3		11.2	17.7	1.000011
77800.0	29.2	-60.3			47.9	568.3		10.5	17.7	1.000011
78000.0	29.0	-60.3			47.4	568.4		9.8	17.7	1.000011
78200.0	28.7	-60.3			46.9	568.4		8.7	17.5	1.000010
78400.0	28.4	-60.3			46.5	568.4		7.0	17.3	1.000010
78600.0	28.1	-60.2			46.0	568.5		5.2	17.0	1.000010
78800.0	27.8	-60.2			45.5	568.5		3.3	16.8	1.000010
79000.0	27.6	-60.2			45.1	568.5		1.5	16.6	1.000010
79200.0	27.3	-60.2			44.6	568.6		359.5	16.4	1.000010
79400.0	27.0	-60.1			44.2	568.6		357.6	16.2	1.000010
79600.0	26.8	-60.1			43.8	568.6		355.5	16.1	1.000010
79800.0	26.5	-60.1			43.3	568.7		353.5	16.0	1.000010
80000.0	26.2	-60.1			42.9	568.7		351.8	15.4	1.000010
80200.0	26.0	-60.0			42.5	568.7		350.2	16.9	1.000009
80400.0	25.7	-60.0			42.1	568.8		348.7	17.3	1.000009
80600.0	25.5	-60.0			41.6	568.8		347.3	17.8	1.000009
80800.0	25.2	-60.0			41.2	568.8		345.9	16.3	1.000009
81000.0	25.0	-59.9			40.6	568.9		344.6	18.8	1.000009
81200.0	24.7	-59.9			40.4	568.9		343.4	19.3	1.000009
81400.0	24.5	-59.9			40.0	568.9		342.2	19.8	1.000009
81600.0	24.3	-59.8			39.6	569.0		342.9	20.7	1.000009

UPPER AIR DATA
 0190020049
 WHITE SANDS
 TABLE V. (CONT)

STATION ALTITUDE 3989.00 FEET MSL
 19 JAN. 78 0820 HRS MST
 ASCENSION NO. 49

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNOTS	KNOTS	DIRECTION DEGREES(TN)	SPEED KNOTS	
81600.0	24.0	-59.8			39.2	569.0		344.2	21.6	1.000009
82000.0	23.8	-59.8			38.8	569.1		345.3	22.6	1.000009
82400.0	23.6	-59.6			38.4	569.3		346.4	23.6	1.000009
82800.0	23.3	-59.4			38.0	569.6		347.3	24.5	1.000006
83200.0	23.1	-59.1			37.6	569.9		348.2	25.6	1.000006
83600.0	22.9	-58.9			37.2	570.2		349.0	26.6	1.000008
84000.0	22.7	-58.7			36.8	570.5		349.8	27.6	1.000008
84400.0	22.4	-58.5			36.4	570.8		350.1	28.4	1.000008
84800.0	22.2	-58.3			36.0	571.0		349.5	28.5	1.000008
85200.0	22.0	-58.1			35.6	571.3		349.0	28.6	1.000008
85600.0	21.8	-57.9			35.3	571.6		348.5	28.8	1.000008
86000.0	21.6	-57.7			34.9	571.9		348.0	28.9	1.000008
86400.0	21.4	-57.4			34.5	572.2		347.4	29.0	1.000008
86800.0	21.2	-57.2			34.1	572.5		346.9	29.2	1.000008
87200.0	21.0	-57.0			33.8	572.7		346.4	29.3	1.000008
87600.0	20.8	-56.8			33.4	573.0		345.9	29.5	1.000007
88000.0	20.6	-56.6			33.1	573.3		345.5	29.3	1.000007
88400.0	20.4	-56.4			32.7	573.6		345.1	29.2	1.000007
88800.0	20.2	-56.2			32.4	573.9		344.6	29.0	1.000007
89200.0	20.0	-56.0			32.0	574.1		344.2	28.9	1.000007
89600.0	19.8	-55.8			31.7	574.3		343.8	28.7	1.000007
90000.0	19.6	-55.7			31.4	574.5		343.3	28.6	1.000007
90400.0	19.4	-55.6			31.1	574.7		342.9	28.5	1.000007
90800.0	19.2	-55.4			30.8	574.9		342.4	28.3	1.000007
91200.0	19.0	-55.3			30.4	575.0		342.3	28.2	1.000007
91600.0	18.9	-55.1			30.1	575.2		342.6	28.0	1.000007
92000.0	18.7	-55.0			29.8	575.4		343.4	27.9	1.000007
92400.0	18.5	-54.9			29.5	575.6		344.0	27.8	1.000007
92800.0	18.3	-54.7			29.2	575.8		344.6	27.7	1.000007
93200.0	18.2	-54.6			28.9	575.9		345.2	27.6	1.000006

UPPER AIR DATA
 C150020045
 WHITE SANDS
 TABLE V. (CONT)

STATION ALTITUDE 3989.00 FEET MSL
 19 JAN. 78
 ASCENSION NO. 49
 0820 HRS MST

GEODETIC COORDINATES
 32.40043 LAT NFG
 106.57033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CM ³ WEIER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE				DIRECTION DEGREES (TN)	SPEED KNOTS	
87800.0	16.0	-54.5			28.7	576.1	345.8	27.5	1.000006
88000.0	17.5	-54.3			28.4	576.3	346.4	27.4	1.000006
88200.0	17.7	-54.2			28.1	576.5	347.0	27.3	1.000006
88400.0	17.5	-54.0			27.8	576.7	347.3	27.0	1.000006
88600.0	17.3	-53.9			27.5	576.8	347.6	26.7	1.000006
88800.0	17.2	-53.8			27.2	577.0	347.8	26.4	1.000006
89000.0	17.0	-53.6			27.0	577.2	348.0	26.1	1.000006
89200.0	16.8	-53.5			26.7	577.4	348.2	25.8	1.000006
89400.0	16.7	-53.4			26.4	577.6	348.5	25.5	1.000006
89600.0	16.5	-53.2			26.2	577.7	348.7	25.2	1.000006
89800.0	16.4	-53.1			25.9	577.9	349.0	24.9	1.000006
90000.0	16.2	-52.9			25.7	578.1	349.2	24.6	1.000006
90200.0	16.1	-52.8			25.4	578.3	349.0	24.9	1.000006
90400.0	15.9	-52.7			25.1	578.5	348.7	25.2	1.000006
90600.0	15.8	-52.5			24.9	578.7	348.5	25.5	1.000006
90800.0	15.6	-52.4			24.6	578.8	348.2	25.8	1.000005
91000.0	15.5	-52.3			24.4	579.0	347.9	26.2	1.000005
91200.0	15.3	-52.1			24.1	579.2	347.7	26.5	1.000005
91400.0	15.2	-52.0			23.9	579.4	347.4	26.8	1.000005
91600.0	15.0	-51.8			23.7	579.6	347.2	27.2	1.000005
91800.0	14.9	-51.7			23.4	579.7	346.9	27.5	1.000005
92000.0	14.8	-51.6			23.2	579.9	346.7	27.8	1.000005
92200.0	14.6	-51.4			23.0	580.1	347.7	27.3	1.000005
92400.0	14.5	-51.3			22.7	580.3	348.8	26.9	1.000005
92600.0	14.3	-51.2			22.5	580.5	349.9	26.4	1.000005
92800.0	14.2	-51.0			22.3	580.6	351.0	26.0	1.000005
93000.0	14.1	-50.9			22.1	580.8	352.2	25.6	1.000005
93200.0	13.9	-50.7			21.8	581.0	353.4	25.1	1.000005
93400.0	13.8	-50.6			21.6	581.2	354.6	24.7	1.000005
93600.0	13.7	-50.5			21.4	581.4	355.9	24.3	1.000005

STATION ALTITUDE 3989.00 FEET MSL
19 JAN. 76 0820 HRS MST
ASCENSION NO. 49

UPPER AIR DATA
0190020049
WHITE SANDS
TABLE V. (CONT)

GEODETIC COORDINATES
52.40043 LAT DEG
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNOTS	KNOTS	DIRECTION DEGREES(TN)	SPEED KNOTS	
93600.0	13.6	-50.5			21.2	581.5		357.2	24.0	1.000005
94000.0	13.4	-50.7			21.0	581.7		358.6	23.5	1.000005
94200.0	13.3	-50.1			20.8	581.9		.3	23.2	1.000005
94400.0	13.2	-49.9			20.6	582.1		2.3	22.8	1.000005
94600.0	13.0	-49.6			20.3	582.3		4.3	22.5	1.000005
94800.0	12.9	-49.6			20.1	582.4		6.3	22.1	1.000004
95000.0	12.8	-49.5			19.9	582.6		8.4	21.8	1.000004
95200.0	12.7	-49.4			19.7	582.8		10.6	21.5	1.000004
95400.0	12.6	-49.2			19.5	583.0		12.8	21.3	1.000004
95600.0	12.4	-49.1			19.4	583.1		15.1	21.1	1.000004
95800.0	12.3	-49.0			19.2	583.3		17.4	20.9	1.000004
96000.0	12.2	-48.8			19.0	583.5		19.7	20.8	1.000004
96200.0	12.1	-48.7			18.8	583.7		18.7	20.7	1.000004
96400.0	12.0	-48.5			18.6	583.9		12.5	20.9	1.000004
96600.0	11.9	-48.4			18.4	584.0		6.5	21.3	1.000004
96800.0	11.8	-48.3			18.2	584.2		.8	22.0	1.000004
97000.0	11.6	-48.1			18.0	584.4		355.5	22.8	1.000004
97200.0	11.5	-48.0			17.9	584.6		350.6	23.6	1.000004
97400.0	11.4	-47.9			17.7	584.8		346.1	25.0	1.000004
97600.0	11.3	-47.7			17.5	584.9		342.1	26.3	1.000004
97800.0	11.2	-47.6			17.3	585.1		336.4	27.0	1.000004
98000.0	11.1	-47.4			17.2	585.3		335.2	29.3	1.000004
98200.0	11.0	-47.3			17.0	585.5				1.000004
98400.0	10.9	-47.2			16.8	585.6				1.000004
98600.0	10.8	-47.0			16.6	585.8				1.000004
98800.0	10.7	-46.9			16.5	586.0				1.000004
99000.0	10.6	-46.7			16.3	586.2				1.000004
99200.0	10.5	-46.6			16.1	586.4				1.000004
99400.0	10.4	-46.5			16.0	586.5				1.000004
99600.0	10.3	-46.3			15.8	586.7				1.000004

STATION ALTITUDE 3989.00 FEET MSL		UPPER AIR DATA		GEODETTIC COORDINATES	
19 JAN. 78		C190020049		32.40043 LAT DEG	
ASCENSION NO. 44		WHITE SANDS		106.37033 LON DEG	
		TABLE V. (CONT)			

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE				DIRECTION DEGREES(TN)	SPEED KNOTS	
99800.0	10.2	-46.2			15.7	586.9			1.000003
100000.0	10.1	-46.1			15.5	587.1			1.000003
100200.0	10.0	-45.9			15.4	587.3			1.000003
100400.0	9.9	-46.0			15.2	587.1			1.000003
100600.0	9.8	-46.2			15.1	587.0			1.000003

STATION ALTITUDE 5989.00 FEET MSL
 19 JAN. 78
 ASCENSION NO. 49
 0820 HRS MST
 MANDATORY LEVELS
 C19J020049
 WHITE SANDS
 TABLE VI.
 GEOMETRIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.	WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE	PERCENT	DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	5020.	-4.4	-9.4	08.	144.7	5.7
800.0	6583.	-5.3	-7.5	34.	143.3	6.9
750.0	8251.	-3.2	-6.8	76.	201.5	3.1
700.0	10039.	-5.0	-13.5	51.	211.9	7.2
650.0	11939.	-7.6	-19.9	36.	242.7	10.3
600.0	13972.	-10.3	-23.0	34.	281.7	14.2
550.0	16182.	-9.3	-16.1	49.	306.2	23.8
500.0	18578.	-13.9	-23.7	43.	298.6	25.5
450.0	21174.	-20.0	-26.6	46.	288.3	29.1
400.0	24002.	-26.7	-30.8	68.	266.9	29.0
350.0	27112.	-35.1	-40.4	58.	283.8	41.3
300.0	30574.	-43.4	-49.2	52.	274.7	75.6
250.0	34548.	-49.5			271.6	111.8
200.0	39327.	-51.1			214.3	97.6
175.0	42147.	-54.9			212.9	88.1
150.0	45359.	-58.5			274.8	75.7
125.0	49095.	-62.2			266.7	52.1
100.0	53525.	-70.4			277.8	50.3
80.0	57891.	-68.6			212.7	9.2
70.0	60522.	-67.0			291.5	21.6
60.0	63575.	-66.5			320.5	10.5
50.0	67206.	-65.3			327.2	11.0
40.0	71686.	-63.2			337.5	14.1
30.0	77529.	-60.4			10.5	17.7
25.0	81261.	-59.9			342.6	20.6
20.0	85868.	-56.0			342.8	26.4
15.0	91929.	-51.6			346.4	27.0
10.0	100669.	-45.9				

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3997.30 FEET MSL
 14 JAN. 78 0320 HRS MST
 ASCENSION NO. 4

SIGNIFICANT LEVEL DATA

0190060004

S M R

TABLE VII.

GEODETIC COORDINATES
 32.48034 LAT NEG
 106.42307 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES	DEWPOINT CENTIGRADE	
884.9	3997.3	-7.5	-7.5	54.0
873.3	4346.2	-2.5	-10.5	54.0
850.0	5048.5	-4.0	-9.4	60.0
817.5	6052.7	-6.9	-9.4	82.0
813.3	6184.8	-6.4	-8.3	86.0
802.3	6534.8	-5.7	-7.7	86.0
790.8	6905.9	-6.5	-8.1	88.0
780.3	7250.4	-4.3	-4.7	97.0
769.3	7618.7	-5.1	-4.6	89.0
755.8	8079.2	-2.9	-4.2	91.0
745.3	8443.1	-2.9	-10.4	56.0
734.3	8829.7	-2.9	-11.1	53.0
721.1	9300.3	-4.0	-10.0	63.0
703.3	9946.0	-5.1	-15.9	50.0
700.0	10067.2	-5.4	-14.4	49.0
673.3	11064.5	-7.4	-16.7	47.0
651.3	11912.7	-7.6	-26.1	21.0
593.3	14279.3	-10.4	-31.5	16.0
574.3	15104.2	-8.2	-22.6	30.0
557.3	15868.7	-6.5	-18.8	43.0
531.3	17076.8	-11.4	-20.4	47.0
512.3	17490.7	-12.4	-22.9	41.0
500.0	18597.6	-13.9	-25.4	37.0
462.3	20530.9	-18.7	-26.6	41.0
446.3	21386.2	-20.5	-24.8	47.0
416.3	23061.4	-24.8	-29.0	66.0
400.0	24008.7	-27.2	-31.0	60.0
351.8	26990.5	-35.0	-35.8	81.0
320.8	29074.3	-40.2	-46.4	51.0
300.0	30560.3	-43.7	-49.8	50.0

STATION ALTITUDE 3497.30 FEET MSL
 19 JAN. 78 0820 HRS MST
 ASCENSION NO. 4

SIGNIFICANT LEVEL DATA
 0150060004
 S M R
 TABLE VII. (CONT)

GEOMETRIC COORDINATES
 32.48034 LAT DEG
 106.42307 LON DEG

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE		REL. HUM. PERCENT
	AIN DEGREES	DEWPOINT CENTIGRADE	
290.3	31280.6	-45.4	
267.3	33078.9	-46.3	
250.0	34523.9	-49.3	
241.3	35280.3	-51.3	
231.3	36179.8	-51.4	
221.8	37073.6	-50.0	
200.0	39282.2	-50.6	
164.3	41010.3	-54.3	
172.3	42421.3	-54.3	
150.0	45301.5	-57.5	
127.3	48653.0	-61.6	
100.0	53438.1	-70.2	
70.0	60421.2	-66.3	
50.0	67075.2	-65.9	
44.5	69386.0	-65.2	

GEOMETRIC COORDINATES
32.46354 LAT NEG
100.42307 LON DEG

UPPER AIR DATA
C190060004
S M R
TABLE VIII.

STATION ALTITUDE 3957.30 FEET MSL
14 JAN. 78
ASCENSION NO. 4
0820 HRS MST

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE				DIRECTION DEGREES(T)	SPEED KNOTS	
3997.3	884.9	-5.5	-7.5	59.0	1129.0	643.6	180.0	9.9	1.000269
4000.0	884.8	-5.5	-7.5	59.0	1128.9	643.7	180.0	9.9	1.000269
4500.0	868.1	-2.8	-10.2	56.6	1117.4	640.9	176.5	10.2	1.000263
5000.0	851.6	-3.9	-9.5	65.2	1100.3	639.7	173.3	11.1	1.000261
5500.0	835.2	-5.3	-9.3	73.2	1084.6	638.0	170.6	11.8	1.000258
6000.0	819.2	-6.7	-9.4	81.2	1069.7	636.3	168.7	11.1	1.000254
6500.0	803.4	-5.8	-7.7	86.0	1045.0	637.5	167.2	9.0	1.000251
7000.0	787.9	-5.9	-7.2	90.5	1025.3	637.4	170.1	6.7	1.000247
7500.0	772.8	-3.5	-4.7	91.6	996.3	640.4	179.4	4.4	1.000244
8000.0	756.1	-2.9	-4.2	90.7	975.2	641.1	179.6	4.1	1.000240
8500.0	743.7	-2.9	-10.5	55.6	957.3	640.9	180.9	3.9	1.000227
9000.0	729.5	-3.3	-10.7	56.6	940.4	640.4	198.9	4.6	1.000224
9500.0	715.5	-4.3	-11.1	59.0	926.0	639.2	210.4	5.8	1.000220
10000.0	701.8	-5.2	-14.1	49.6	911.6	638.0	215.4	7.6	1.000214
10500.0	688.3	-6.3	-15.4	48.1	897.5	636.8	219.1	8.9	1.000210
11000.0	675.0	-7.3	-16.6	47.1	883.6	635.5	223.1	9.2	1.000206
11500.0	661.9	-7.5	-20.7	33.7	867.4	635.2	231.6	10.1	1.000200
12000.0	649.1	-7.7	-26.3	20.8	851.3	634.9	241.7	11.0	1.000193
12500.0	636.4	-8.3	-27.3	19.5	836.7	634.1	251.0	12.3	1.000190
13000.0	624.0	-8.9	-28.4	18.7	822.3	633.4	258.6	13.9	1.000186
13500.0	611.6	-9.5	-29.5	17.6	808.1	632.7	267.9	14.1	1.000183
14000.0	599.9	-10.1	-30.7	16.6	794.1	632.0	277.3	14.4	1.000179
14500.0	588.2	-9.8	-26.6	19.7	777.8	632.3	291.1	14.8	1.000176
15000.0	576.7	-8.5	-23.6	28.2	758.0	634.0	303.6	16.1	1.000174
15500.0	565.4	-8.4	-20.5	36.7	743.3	634.2	306.8	18.7	1.000172
16000.0	554.4	-8.8	-19.0	43.4	730.0	633.7	308.4	21.4	1.000170
16500.0	543.6	-10.0	-19.6	45.1	715.0	632.2	302.2	23.7	1.000167
17000.0	532.9	-11.2	-20.3	46.7	708.2	630.8	297.6	25.8	1.000164
17500.0	522.4	-11.9	-21.5	44.2	696.0	630.0	295.8	25.8	1.000161
18000.0	512.1	-12.4	-22.9	40.9	683.8	629.3	294.7	25.7	1.000158

STATION ALTITUDE 3997.30 FEET MSL
 19 JAN. 78 0820 HRS MST
 ASCENSION NO. 4

UPPER AIR DATA
 0190000004
 S M R
 TABLE VIII. (CONT)

SYNOPTIC COORDINATES
 32.42034 LAT DEG
 106.42307 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT DEGREES	RFL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
18500.0	502.0	-13.7	-25.0	37.6	673.5	621.7	296.3	25.3	1.000155
19000.0	491.9	-14.9	-26.0	37.8	663.2	620.2	297.4	25.2	1.000152
19500.0	482.0	-16.1	-26.9	38.9	653.0	624.7	296.5	26.0	1.000149
20000.0	472.4	-17.4	-27.7	39.9	643.1	623.2	295.1	26.9	1.000147
20500.0	462.9	-18.6	-28.6	40.9	633.2	621.7	291.5	27.8	1.000144
21000.0	453.5	-19.7	-28.7	44.3	623.0	620.4	289.6	28.4	1.000142
21500.0	444.2	-20.8	-28.8	48.4	612.9	619.0	289.7	28.1	1.000140
22000.0	435.1	-22.1	-28.7	54.7	603.4	617.5	291.6	27.1	1.000138
22500.0	426.1	-23.4	-28.7	61.0	594.0	615.9	294.8	25.7	1.000136
23000.0	417.4	-24.6	-28.9	67.2	584.8	614.3	293.0	25.5	1.000134
23500.0	408.7	-25.9	-30.2	67.1	575.6	612.7	288.2	26.4	1.000131
24000.0	400.1	-27.2	-31.6	66.0	566.5	611.1	285.0	28.4	1.000129
24500.0	391.6	-28.5	-32.9	65.2	557.4	609.5	282.9	31.0	1.000127
25000.0	383.3	-29.8	-34.3	64.3	548.5	607.6	282.6	32.8	1.000124
25500.0	375.1	-31.1	-35.7	63.5	539.7	606.2	283.2	34.2	1.000122
26000.0	367.1	-32.4	-37.1	62.7	531.1	604.5	283.4	35.9	1.000120
26500.0	359.3	-33.7	-38.5	61.8	522.7	602.9	283.3	37.6	1.000118
27000.0	351.7	-35.0	-39.8	61.0	514.3	601.2	283.6	39.8	1.000116
27500.0	344.0	-36.3	-41.4	58.6	505.7	599.6	284.3	42.0	1.000114
28000.0	336.4	-37.5	-43.0	56.2	497.3	598.1	284.2	44.6	1.000112
28500.0	329.1	-38.8	-44.6	53.8	489.0	596.5	283.2	47.7	1.000110
29000.0	321.9	-40.0	-46.1	51.4	480.9	594.9	281.8	51.2	1.000108
29500.0	314.7	-41.2	-47.4	50.7	472.5	593.4	279.8	55.5	1.000106
30000.0	307.7	-42.4	-48.5	50.4	464.4	591.8	277.8	60.6	1.000104
30500.0	300.8	-43.6	-49.7	50.0	456.4	590.3	275.7	67.2	1.000102
31000.0	294.0	-44.7	-58.5	14.5**	448.4	588.8	274.0	74.1	1.000100
31500.0	287.4	-45.5			439.8	587.6	272.7	81.5	1.000098
32000.0	280.9	-46.8			430.3	587.5	271.7	88.8	1.000096
32500.0	274.5	-46.0			421.0	587.1	271.4	95.1	1.000094
33000.0	268.3	-46.3			411.9	586.8	271.1	101.4	1.000092

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

UPPER AIR DATA
 0190060004
 S M R
 TABLE VIII. (CONT)

STATION ALTITUDE 3997.30 FEET MSL
 19 JAN. 78
 ASCENSION NO. 4
 0820 HRS MST

GEODETIC COORDINATES
 32.48034 LAT DEG
 100.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE			KNOTS	KN	DIRECTION DEGREES(TN)	SPEED KNOTS	
33500.0	262.1	-47.2			404.1	585.6		271.4	107.3	1.000090
34000.0	256.1	-48.2			396.7	584.3		271.6	113.3	1.000088
34500.0	250.3	-49.3			389.4	582.9		271.9	114.5	1.000087
35000.0	244.5	-50.6			382.6	581.2		272.1	115.3	1.000085
35500.0	238.8	-51.3			375.0	580.2		272.4	113.2	1.000084
36000.0	233.3	-51.4			366.4	580.2		272.8	110.6	1.000082
36500.0	227.9	-50.9			357.1	580.8		273.1	108.5	1.000080
37000.0	222.6	-50.1			347.6	581.8		273.3	106.5	1.000077
37500.0	217.4	-50.1			339.6	581.8		273.6	103.7	1.000076
38000.0	212.4	-50.3			331.9	581.6		274.0	100.9	1.000074
38500.0	207.5	-50.4			324.4	581.5		274.6	98.6	1.000072
39000.0	202.7	-50.5			317.1	581.3		275.3	96.5	1.000071
39500.0	197.9	-51.1			310.5	580.6		275.4	96.4	1.000069
40000.0	193.3	-52.1			304.7	579.2		275.6	96.2	1.000068
40500.0	188.8	-53.2			299.0	577.8		275.1	97.1	1.000067
41000.0	184.4	-54.3			293.5	576.4		274.7	98.0	1.000065
41500.0	180.0	-54.3			286.6	576.3		274.6	97.7	1.000064
42000.0	175.8	-54.3			279.8	576.3		274.5	97.1	1.000062
42500.0	171.6	-54.4			273.4	576.2		274.8	94.1	1.000061
43000.0	167.6	-55.0			267.6	575.4		275.4	89.9	1.000060
43500.0	163.6	-55.6			262.0	574.5		276.0	84.7	1.000058
44000.0	159.7	-56.3			256.5	573.7		276.7	78.6	1.000057
44500.0	155.9	-56.9			251.1	572.9		277.0	73.6	1.000056
45000.0	152.2	-57.5			245.9	572.1		276.7	69.3	1.000055
45500.0	148.5	-58.1			240.7	571.3		275.9	65.7	1.000054
46000.0	145.0	-58.7			235.4	570.5		274.5	63.1	1.000052
46500.0	141.5	-59.2			230.3	569.8		273.2	60.3	1.000051
47000.0	138.0	-59.8			225.4	569.1		272.2	57.1	1.000050
47500.0	134.7	-60.3			220.5	568.3		271.4	53.7	1.000049
48000.0	131.4	-60.9			215.7	567.6		271.0	49.8	1.000048

STATION ALTITUDE 3997.30 FEET MSL
19 JAN. 78
ASCENSION NO. 4

UPPER AIR DATA
0190060004
S M R
TABLE VIII. (CONT)

GEODETIC COORDINATES
32.42034 LAT DEG
106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CM ³	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE				DIRECTION DEGREES (TN)	SPEED KNOTS	
40500.0	126.3	-61.4			211.0	566.9	270.7	46.6	1.000047
49000.0	125.1	-62.2			206.6	565.8	270.5	46.2	1.000046
49500.0	122.0	-63.1			202.3	564.6	270.4	45.9	1.000045
50000.0	118.9	-64.0			198.2	563.5	270.5	47.6	1.000044
50500.0	116.0	-65.0			194.1	562.1	270.6	49.3	1.000043
51000.0	113.1	-65.9			190.1	560.9	271.1	49.8	1.000042
51500.0	110.3	-66.8			186.1	559.7	271.7	50.1	1.000041
52000.0	107.5	-67.7			182.3	558.4	273.0	49.9	1.000041
52500.0	104.6	-68.6			178.6	557.2	274.6	49.6	1.000040
53000.0	102.2	-69.5			174.9	555.9	276.1	48.5	1.000039
53500.0	99.7	-70.3			171.2	554.9	277.5	46.6	1.000038
54000.0	97.2	-70.0			168.6	555.5	278.7	44.3	1.000037
54500.0	94.7	-69.7			164.2	555.7	279.1	41.1	1.000036
55000.0	92.3	-69.5			157.9	556.0	279.4	38.2	1.000035
55500.0	90.0	-69.2			153.7	556.4	276.7	36.4	1.000034
56000.0	87.7	-68.9			149.6	556.8	277.9	34.6	1.000033
56500.0	85.5	-68.6			145.7	557.1	277.1	33.9	1.000032
57000.0	83.4	-68.4			141.8	557.5	276.3	33.3	1.000032
57500.0	81.3	-68.1			138.1	557.9	275.9	31.4	1.000031
58000.0	79.2	-67.8			134.4	558.2	275.7	29.1	1.000030
58500.0	77.2	-67.5			130.8	558.6	276.2	26.6	1.000029
59000.0	75.3	-67.3			127.4	559.0	276.8	23.9	1.000028
59500.0	73.4	-67.0			124.0	559.4	280.3	21.8	1.000028
60000.0	71.5	-66.7			120.7	559.7	284.1	20.8	1.000027
60500.0	69.7	-66.5			117.5	560.0	287.8	19.6	1.000026
61000.0	68.0	-66.4			114.6	560.1	290.5	18.0	1.000026
61500.0	66.3	-66.4			111.7	560.2	293.7	16.3	1.000025
62000.0	64.6	-66.4			108.9	560.2	296.2	14.5	1.000024
62500.0	63.0	-66.3			106.1	560.5	304.0	12.9	1.000024
63000.0	61.4	-66.3			103.5	560.5	310.7	12.8	1.000023

STATION ALTITUDE 3997.30 FEET MSL
19 JAN. 78 0820 HRS MST
ASCENSION NO. 4

UPPER AIR DATA
0190060004
S M R
TABLE VIII. (CONT)

GEODETIC COORDINATES
32.46034 LAT DEG
106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE				DIRECTION DEGREES (TN)	SPEED KNOTS	
63500.0	59.9	-66.2			100.9	560.4	317.5	12.9	1.000022
64000.0	58.4	-66.2			98.3	560.5	322.3	12.6	1.000022
64500.0	57.0	-66.1			95.8	560.5	327.0	12.3	1.000021
65000.0	55.5	-66.1			93.4	560.6	330.7	11.0	1.000021
65500.0	54.1	-66.0			91.1	560.7	334.9	9.5	1.000020
66000.0	52.6	-66.0			88.8	560.7	326.4	9.5	1.000020
66500.0	51.5	-66.0			86.5	560.8	312.5	11.3	1.000019
67000.0	50.2	-65.9			84.4	560.8	304.6	14.1	1.000019
67500.0	48.9	-65.8			82.2	561.0	301.3	17.7	1.000018
68000.0	47.7	-65.6			80.1	561.2	299.0	21.4	1.000018
68500.0	46.5	-65.5			78.1	561.4			1.000017
69000.0	45.4	-65.3			76.1	561.6			1.000017

STATION ALTITUDE 3947.30 FEET MSL
14 JAN. 78
ASCENSION NO. 4

WADSWORTH LEVELS
0150060004
S M R
TABLE IX.

GEOGRAPHIC COORDINATES
32.46034 LAT DEG
106.42307 LONG DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE		DIRECTION DEGREES (TR)	SPEED KNOTS
850.0	5047.	-4.0	-7.4	80.	173.1	11.2
800.0	6608.	-5.4	-7.8	86.	166.7	6.5
750.0	8279.	-2.9	-7.3	72.	179.2	4.0
700.0	10067.	-5.4	-14.4	45.	215.9	7.9
650.0	11965.	-7.7	-26.2	21.	241.2	10.9
600.0	13998.	-10.1	-30.7	17.	277.4	14.4
550.0	16208.	-9.3	-19.2	44.	305.5	22.4
500.0	18605.	-13.4	-25.4	37.	256.6	25.2
450.0	21199.	-20.1	-28.8	49.	269.6	28.3
400.0	24025.	-27.2	-31.6	66.	284.8	28.0
350.0	27130.	-35.3	-40.2	80.	285.8	40.5
300.0	30590.	-43.7	-49.8	50.	275.2	69.1
250.0	34564.	-49.3			271.9	114.7
200.0	39337.	-50.6			275.4	66.4
175.0	42160.	-54.3			274.0	79.2
150.0	45378.	-57.9			276.0	75.8
125.0	49113.	-62.3			270.5	46.1
100.0	53549.	-70.5			276.1	15.9
80.0	57925.	-67.9			275.6	28.7
70.0	60567.	-66.5			265.0	16.8
60.0	63631.	-66.2			320.7	12.7
50.0	67259.	-65.9			301.4	17.5